

SPHAEROLOBIUM ACANTHOS (FABACEAE: MIRBELIEAE), A NEW SPECIES FROM THE GRAMPAINS, VICTORIA

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ABSTRACT

Crisp, Michael D. *Sphaerolobium acanthos* (Fabaceae: Mirbelieae), a new species from the Grampians, Victoria. *Muelleria* 8(2): 151–154 (1994). — *Sphaerolobium acanthos*, which is restricted to the Grampians in western Victoria, is described as new. It is distinguished from *S. daviesioides*, which occurs in Western Australia. A key to eastern Australian species of *Sphaerolobium* is presented.

SPHAEROLOBIUM ACANTHOS

Sphaerolobium acanthos Crisp, *sp. nov.*

Sphaerolobium daviesioides auct. non Turcz.; J.H. Willis, *Handbook Pl. Victoria* 2: 256 (1972).

Frutices caulibus ramisque vestitis ramulis numerosis regulatim dispositis divaricatis brevibus (1–2 cm) spinescentibus (1–)3(–5)-furcatis scaberulis, stylo longitudinaliter sinuoso et lateraliter torto, stigma pilorum caespitate. *S. daviesioides* Turcz. similis est sed differt ramulis irregularibus laevibus e partibus infernis caulium ramorumque absentibus, stylo sursum flexo nec sinuoso nec torto, stigma pilis nullis.

HOLOTYPUS: Victoria, Grampians, Victoria Valley, 37°17'30"S, 142°22'30"E, 6 January 1977, *J. Lewenberg s.n.* (MEL 523881).

Rigid, wiry shrubs, 0.2–1 m high, faintly ribbed and minutely scabrous on stems and branches; branches few, ascending, rather long; branchlets numerous, divaricate, often recurved, short (up to 15 mm), commonly 3–5-forked at the tips. *Leaves* scattered to sub-whorled, subulate, 2–3 mm long, caducous, leaving a scale-like persistent base. *Flowers* (1)2 on a very short (up to 0.5 mm) peduncle which is produced into a subulate tip between the flowers; bracts and bracteoles obovate, caducous. *Calyx* campanulate, 3.5–4.5 mm long, divided within 1–1.5 mm of base, uniformly lead-grey; upper lip cuneate, emarginate, with acuminate outcurved tips; lower three lobes uniform, subulate. *Corolla* dull reddish-brown or orange; *standard* transversely broad-elliptic, emarginate, cordate, 7–7.5 mm long and broad including the 1–1.5 mm claw, yellow at centre; *wings* narrow-obovate, 6–7 × 2–2.5 mm including the 1 mm claws, with an adaxial lobe at the base; *keel* obliquely broad-obovate, 6–7 × 3.5 mm including the 1.5 mm claws, with an adaxial lobe at the base. *Stamens* 10, free, uniform; anthers versatile, with conspicuous brownish connective. *Gynoeceium* glabrous, with a 1.5 mm stipe; *style* sinuous, twisted 90–180°, strongly compressed, distal portion erect and adaxially winged; wing narrowly cuneate, 1.5–2 mm long, membraneous, ciliate on margin; *stigma* terminal, marked by a tuft of hairs; *ovary* turgid, with two marginal ovules. *Pod* turgid, broadly obovoid-ellipsoid, somewhat oblique, *c.* 4.5 mm long, *c.* 3.5 mm diam., somewhat pruinose; immature *seed* obliquely very broad-ovoid, not developing an aril. (Figs. 1, 2a-b)

FLOWERING PERIOD

December to January, or rarely November.

FRUITING PERIOD

January to February.

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Figure 1. The holotype of *Sphaerolobium acanthos*.

ETYMOLOGY

The specific epithet is from the Greek *akanthos*, meaning a prickly plant.

SELECTED SPECIMENS (total examined 15)

Victoria — Grampians: Mt William walking track, 9.2 km N of Serra Rd/Halls Gap-Dunkeld Rd intersection, 22 Dec. 1989, *D.E. Albrecht 3913* (MEL 233907); no precise locality, Nov. 1892, *W.R.A.*

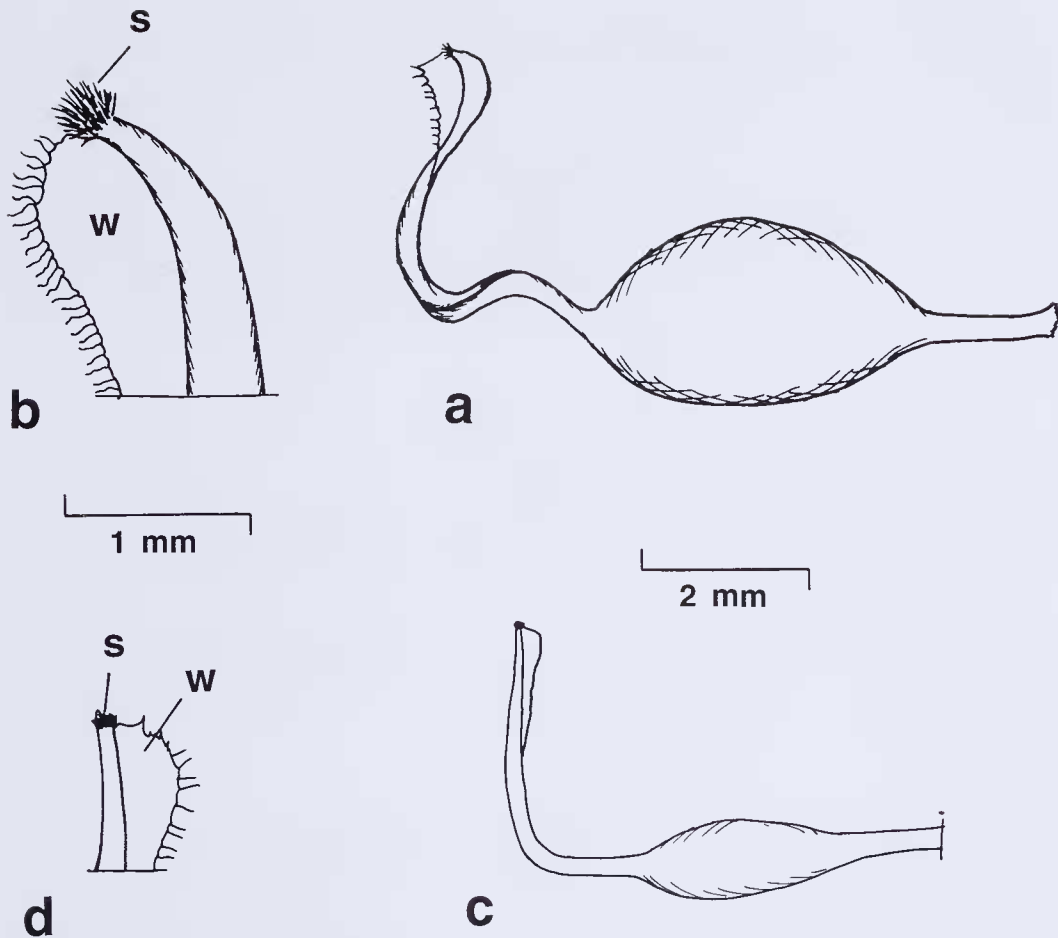


Figure 2. a–b *Sphaerolobium acanthos*. a — gynoecium (stipe at right, style at left). b — distal portion of style, showing membranous wing (w) and stigma (s) with tuft of hairs. c–d *S. daviesioides*. c — gynoecium. d — distal portion of style showing wing (w) and glabrous stigma (s). a–b drawn from *Albrecht 3919* (MEL); c–d drawn from *Taylor 1686* (CBG).

Baker s.n. (MEL 1517581); Mt William, NW slope, 14 Nov. 1966, *A.C. Beaglehole 15919* (MEL 516945); Mt Rosea Ck, above Calectasia Falls, 27 Jan. 1969, *A.C. Beaglehole 30374* (MEL 516946); Mt William, 19 km SSE of Halls Gap, 15 Dec. 1975, *H. Streimann 3070* (A, BISH, CBG, L, MO, PERTH, US).

DISTRIBUTION AND CONSERVATION STATUS

Sphaerolobium acanthos is restricted to the Grampians, in western Victoria, where it has been recorded only from the Halls Gap — Mt William area and the Victoria Valley. The species is clearly rare (by virtue of its restricted distribution) but its conservation status should be evaluated by thorough field survey. One collector (*Albrecht 3913*) indicated that he saw only three plants. However, the plants flower in summer when collectors are less active, and therefore some populations may have been overlooked. All known populations are reserved.

HABITAT

This species is recorded from lower slopes, gullies and near streams. Associated vegetation comprises sclerophyll forest, woodland or heath, including taxa such as *Eucalyptus* aff. *aromaphloia*, *E. willisii*, *Callitris*, *Leptospermum*, *Banksia*, *Pultenaea*, *Hakea*, *Bossiaea*, *Astrotricha* and *Brachyscome*.

AFFINITY

Hitherto, *S. acanthos* has been confused with *S. daviesioides*. However, the latter is endemic to the south coast of Western Australia, where it is found between the Stirling Range and the western end of the Great Australian Bight. *S. daviesioides* differs in having smooth (not scaberulous) stems and branchlets, and its spinescent lateral branchlets are undivided and concentrated near the stem apices, so that the lower portion of the stems and main branches are naked. In *S. acanthos*, the lateral branchlets are often 3–5-forked, and they are evenly spaced (c. 1 cm apart) all along the stems and branches. Whereas the style of *S. acanthos* is sinuous longitudinally as well as twisted laterally through 90–180° (Fig. 2a), that of *S. daviesioides* differs in simply being flexed upwards at 90° from a little below the middle (Fig. 2c). Also, the stigma of *S. acanthos* is furnished with a tuft of hairs (Fig. 2b), whilst that of *S. daviesioides* has none (Fig. 2d).

There appear to be other differences between these species, but evidence is less reliable. For instance, on petal colour, Willis (1973: 256) reports those of *S. acanthos* (under '*S. daviesioides*') to be 'brownish', and on the specimen *Albrecht 3913*, they are described as '*Chorizema* orange with yellow centre in standard'; whilst a specimen of *S. daviesioides sensu stricto* records its flowers as simply 'yellow'. Also, *S. acanthos* flowers in summer (December and January), while *S. daviesioides* flowers in spring (September and October).

Until recently, only two species of *Sphaerolobium* were recognised in eastern Australia, and both were considered to occur in Western Australia as well, viz. *S. daviesioides* and *S. vimineum* (Hnatiuk 1990). Now it appears that there are three species endemic in the east: *S. acanthos*, *S. minus* and *S. vimineum* (Crisp 1993). The following key distinguishes these.

KEY TO EASTERN AUSTRALIAN SPECIES OF *SPHAEROLOBIUM*

- 1 Branchlets numerous, short (to 15 mm), divaricate, spinescent.... **S. acanthos**
 1: Branchlets few, long (several cm), ascending, not pungent..... 2
- 2 Calyx and bracteoles darkly punctate; wings longer than and enclosing keel; style with a membranous wing nearly as broad as long and < 1/4 length of style **S. vimineum**
 2: Calyx and bracteoles uniformly lead-grey; wings equal to and exposing keel; style with wing much longer than broad, tapering down from apex to 1/3 to 1/2 length of style **S. minus**

ACKNOWLEDGEMENT

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REFERENCES

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